

Oct. 19, 1943.

R. J. SCHAEFER ET AL

2,332,347

COMBINATION TOOL

Filed June 13, 1941

2 Sheets-Sheet 1

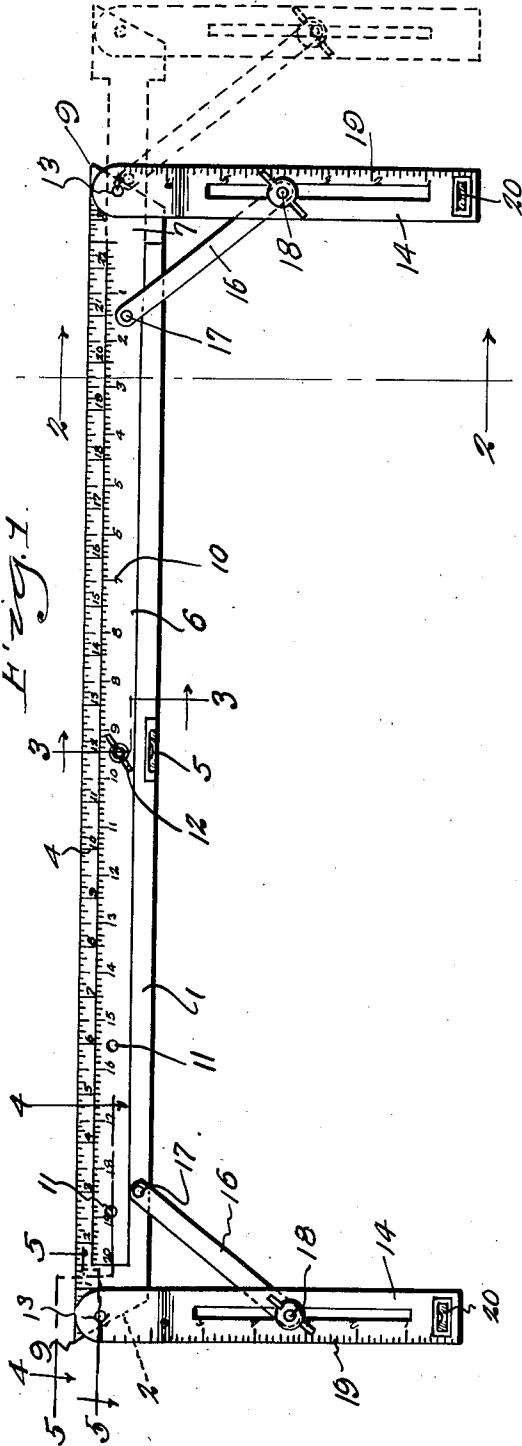


Fig. 2

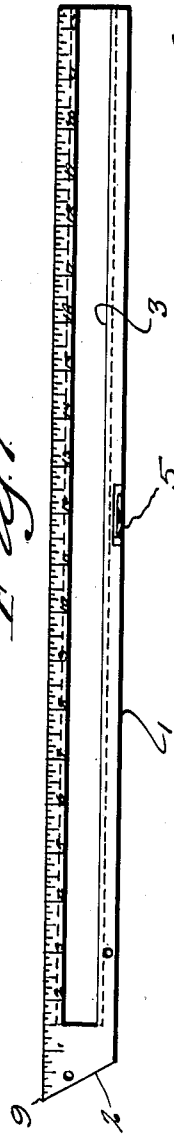
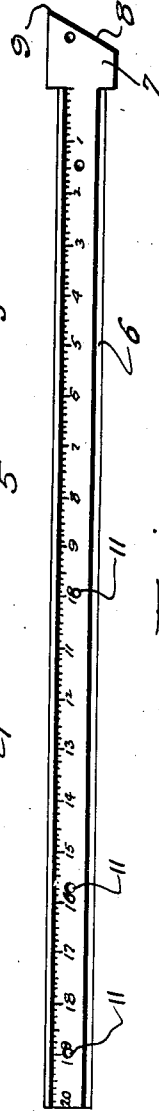


Fig. 3



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Fig. 2.

Fig. 3.

Fig. 6.

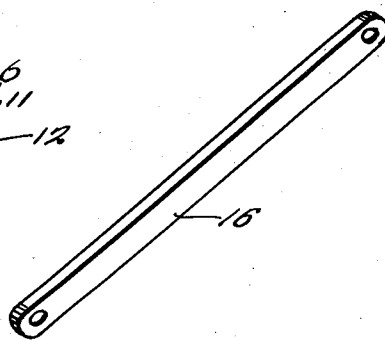
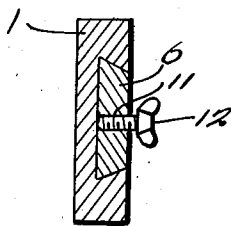
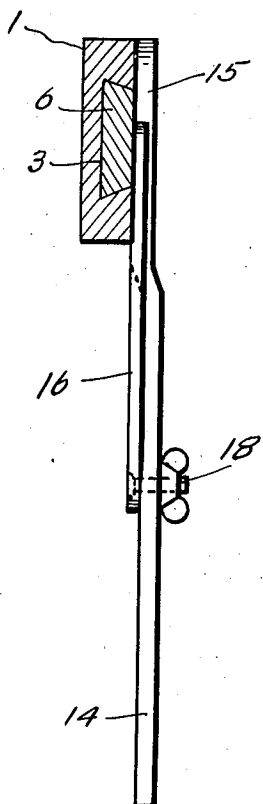


Fig. 5.

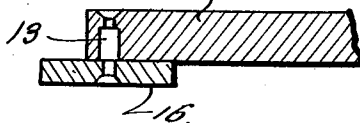
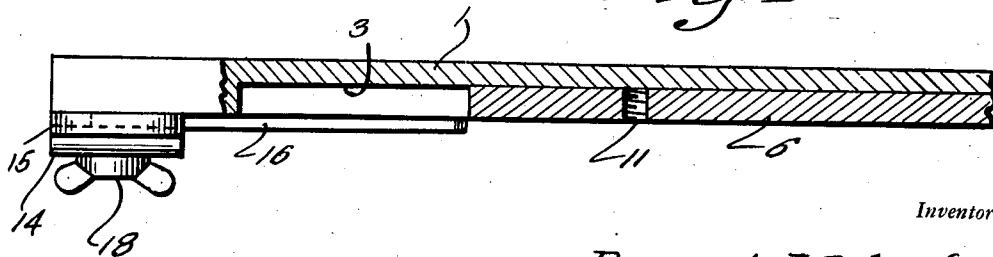


Fig. 4.



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2,332,347

COMBINATION TOOL

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Application June 13, 1941, Serial No. 397,951

1 Claim. (Cl. 33—98)

The present invention relates to new and useful improvements in tools particularly for carpenters and has for its primary object to provide, in a manner hereinafter set forth, a novel construction and arrangement whereby a level, double squares and a means for measuring are combined in a single instrument.

Another very important object of the invention is to provide a combination tool of the aforementioned character which is adapted to be expeditiously adjusted as desired.

Still another very important object of the invention is to provide a compound tool of the character described which, when not in use, may be conveniently folded in a manner to occupy a minimum of space.

Other objects of the invention are to provide a combination tool which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, light in weight, and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation of a combination tool constructed in accordance with the present invention.

Figure 2 is a cross-sectional view through the device, taken substantially on the line 2—2 of Figure 1.

Figure 3 is a cross-sectional view, taken substantially on the line 3—3 of Figure 1.

Figure 4 is a fragmentary view in horizontal section, taken substantially on the line 4—4 of Figure 1.

Figure 5 is a view in horizontal section through one end portion of the device, taken substantially on the line 5—5 of Figure 1.

Figure 6 is a detail view in perspective of one of the pivoted arm braces.

Figure 7 is a detail view in top plan of the beam.

Figure 8 is a detail view in top plan of the sliding bar.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a beam 1, which beam may be of any suitable length and material. The beam 1 is provided with a beveled end 2. Extending longitudinally into the beam 1 from the other end thereof and terminating adjacent the end 2 of said beam is a dovetail

groove or channel 3. The upper marginal portion of the beam 1 is provided with graduations 4 extending from end to end of said beam. Mounted in the lower marginal portion of the beam 1 is a spirit level 5.

The groove 3 in the beam 1 is adapted to slidably receive an extension bar 6 which may also be of any suitable material. The bar 6 includes an enlarged end portion 7 which projects beyond the corresponding end of the beam 1 and which terminates in a beveled end 8 which is similar to the end 2 of said beam 1. Thus, contact points 9 are provided on the ends of the instrument for use when said instrument is utilized for measuring. The upper marginal portion of the bar 6 is provided with graduations 10. At longitudinally spaced points the bar 6 has formed therein threaded openings 11 for the reception of a wing set screw 12, which set screw is engageable with the beam 1 for frictionally securing said bar 6 in adjusted position.

As illustrated to advantage in Figure 5 of the drawings, stationary pivot pins 13 are mounted in the outer end portions of the beam 1 and the bar 6. Journaled for swinging movement on the pins 13 are bevel square arms 14 of suitable material. The arms 14 include offset pivoted end portions 15.

Braces 16 have one end pivotally secured, as at 17, to the beam 1 and the bar 6 adjacent the arms 14. The other end portions of the braces 16 are adjustably secured to the arms 14 through the medium of pin and slot connections 18. Graduations 19 are provided on the arms 14. Mounted transversely in the free end portions of the arms 14 are spirit levels 20. The spirit levels 20 may be observed from either side of the arms 14.

It will thus be seen that a carpenter's tool or instrument has been provided which is adapted to be used for many different purposes. By loosening the wing nuts of the pin and slot connections 18, the arms 14 may be expeditiously adjusted to any desired angle relative to the beam 1. The beveled outer ends 2 and 8 of the beam 1 and the bar 6, respectively, which provide the contact points 9, greatly facilitate measuring the distance between two objects.

It is believed that the many advantages of a combination tool constructed in accordance with the present invention will be readily understood and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construc-

tion may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

An instrument of the character described comprising a flat beam including a measuring edge and having a dovetail channel extending longitudinally in one of its faces from one end to a point in spaced relation to its other end and further having graduations extending from end to end thereof on said one face adjacent the measuring edge, a dovetail bar slidable in the channel flush with said one face of the beam and having graduations on the longitudinal marginal portion

thereof which is adjacent the first-named graduations, and an enlargement of substantial length on one end of the bar adapted to abut said one end of the beam and having its longitudinal surfaces in the planes of the corresponding surfaces of the beam, said enlargement, when in abutting engagement with the beam, constituting an extension of the measuring edge, the outer end of said enlargement and said other end of the beam being oppositely beveled.

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